

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today
(1) was not written for publication in a law journal and
(2) is not binding precedent of the Board.

Paper No. 15

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ROY D. ROBERTS

Appeal No. 1997-2910
Application 08/421,387¹

ON BRIEF

Before KRASS, FLEMING and DIXON, ***Administrative Patent Judges.***

FLEMING, ***Administrative Patent Judge.***

DECISION ON APPEAL

¹ Application for patent filed April 13, 1995.

This is a decision on appeal from the final rejection of claims 1 through 7, all of the claims pending in the present application.

The invention relates to cooling arc lamps with heat sinks when operated in excess of 500 watts. Appellant discloses on page 4 of the specification that figures 1 through 3 illustrate a heat sink embodiment of the present invention. The heat sink 10 comprises an outer fin support 12, an inner fin support 14 and a pleated fin material 16.

Independent claim 1 is reproduced as follows:

1. A heat sink, comprising:

an inner fin support of metal formed in a cylindrical ring and having a first axial length and having open and equal diameter first and second ends;

an outer fin support of metal formed in a cylindrical ring and coaxial with the inner fin support and having a second axial length about equal to said first axial length; and

a single metal fin material in a rectangular strip having a width about equal to said first and second axial lengths and having a length that is accordion-pleated into folds and brazed at each crease to each of the inner and outer fin supports to form a plurality of fins parallel to an axis of both the inner and outer fin supports.

The Examiner relies on the following references:

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Zelinka	2,431,157	Nov. 18, 1947
Depew	2,432,513	Dec. 16, 1947
Rinia	2,532,858	Dec. 5, 1950
Van Warmerdam	2,829,290	Apr. 1, 1958
Roberts	5,399,931	Mar. 21, 1995
Yoshikawa et al. (Yoshikawa) (Japanese Kokai)	54-51052	Apr. 21, 1979

Claims 1, 3, 4 and 6 have been finally rejected under 35 U.S.C. § 103 as being unpatentable over Rinia. Claims 2 and 5 have been finally rejected under 35 U.S.C. § 103 as being unpatentable over Rinia in view of Yoshikawa. Claim 7 has been finally rejected under 35 U.S.C. § 103 as being unpatentable over Rinia in view of Roberts. On page 4 of the answer, the Examiner has indicated that the rejection of claims 2 and 5 under 35 U.S.C. § 103 as being unpatentable over Rinia in view of Yoshikawa has been withdrawn. In addition, the Examiner has set forth a new ground of rejection in which claims 1, 3, 4 and 6 are rejected under 35 U.S.C. § 103 as being unpatentable over the combination of Depew and either Zelinka or Van Warmerdam.

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Rather than reiterate the arguments of Appellant and the Examiner, reference is made to the briefs² and the answers³ for the respective details thereof.

OPINION

We will not sustain the rejection of claims 1, 3, 4, 6 and 7 under 35 U.S.C. § 103.

The Examiner has failed to set forth a ***prima facie*** case. It is the burden of the Examiner to establish why one having ordinary skill in the art would have been led to the claimed invention by the express teachings or suggestions found in the prior art, or by implications contained in such teachings or suggestions. ***In re Sernaker***, 702 F.2d 989, 995, 217 USPQ 1, 6 (Fed. Cir. 1983). "Additionally, when determin-

² Appellant filed an appeal brief on June 10, 1996. Appellant filed a reply brief on February 24, 1997. The Examiner responded to Appellant's reply brief with a supplemental Examiner's answer on December 8, 1998. Thus, the reply brief has been entered and considered by the Examiner and is properly before us for our consideration.

³ The Examiner responded to the appeal brief with an Examiner's answer on December 20, 1996. The Examiner responded to the reply brief with a supplemental Examiner's answer on December 8, 1998.

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ing obviousness, the claimed invention should be considered as a whole; there is no legally recognizable 'heart' of the invention." *Para-Ordnance Mfg. v. SGS Importers Int'l, Inc.*, 73 F.3d 1085, 1087, 37 USPQ2d 1237, 1239 (Fed. Cir. 1995), *cert. denied*, 519 U.S. 822 (1996) *citing W. L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1548, 220 USPQ 303, 309 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984).

Claims 1, 3, 4 and 6 stand rejected under 35 U.S.C. § 103 as being unpatentable over Rinia. On pages 4 and 5 of the appeal brief, Appellant argues that Rinia fails to teach an inner

fin support, an outer fin support, and a single metal fin material that is accordion-pleated into folds and brazed at each crease to the inner and outer fin supports as recited in Appellant's claims.

Upon our review of Rinia, we fail to find that Rinia teaches or suggests Appellant's claimed inner fin support, outer fin support, and a single metal fin material that is

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accordion-pleated into folds and brazed at each crease to each of the inner and outer fin supports as recited in Appellant's claims. Upon a close review of Rinia, we fail to find that figure 1 or figure 2 shows a single metal fin material that is accordion-pleated into folds and brazed at each of the creases. Instead, Rinia discloses rings of vanes that are formed into zigzag bands. See column 2, lines 40 through 46. Therefore, we fail to find that Rinia teaches or suggests the claim limitations as recited in Appellant's claims and, therefore, we will not sustain the rejection. In regard to the rejection of claim 7 under 35 U.S.C. § 103 as being unpatentable over Rinia in view of Roberts, we note that the Examiner is relying on Rinia for the above limitations. Therefore, we will not sustain the rejection of claim 7 for the same reasons as above.

Claims 1, 3, 4 and 6 stand rejected under 35 U.S.C. § 103 as unpatentable over the combination of Depew and either Zelinka or Van Warmerdam. On page 7 of the reply brief,

Appellant argues that these references do not suggest the combination of the claimed invention. In particular, Appellant argues that the motivation suggested in the Office action that an artisan would find such combination obvious repeats the same pedestrian reason that cooling would be better.

The Federal Circuit states that "[t]he mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." ***In re Fritch***, 972 F.2d 1260, 1266 n.14, 23 USPQ2d 1780, 1783-84 n.14 (Fed. Cir. 1992), ***citing In re Gordon***, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984).

On page 5 of the Examiner's answer, the Examiner argues that it would have been obvious to one of ordinary skill in the art to either use the radiator fins of Depew or either the radiator of Zelinka or Van Warmerdam or, conversely, to use the inner and outer rings of Zelinka or Van Warmerdam for the radiator of Depew. The Examiner argues that in the first case,

the radiator fins of Depew would provide better cooling capability, while in the second case, the inner and outer rings of Zelinka or Van Warmerdam would provide better support for the radiator fins of Depew.

We fail to find any evidence that Depew would provide better cooling capability or that the inner and outer rings of Zelinka or Van Warmerdam would be needed for better support for the Depew radiator. Depew clearly teaches that the radiator 39 is rigidly secured to the radiator cup 36 by a high melting point solder 44. See column 8, lines 3 through 17. Thus, Depew does not need the inner and outer rings for further support. Turning to Van Warmerdam, figure 2 shows that the inner and outer rings are needed because they need to support cooling fins 6 that are individual pieces. Similarly, Zelinka shows the same principle in that radiator fins 23 are supported by inner and outer rings because they are individual pieces. Thus, Van Warmerdam and Zelinka certain do not suggest the use of inner and outer rings to support a single piece radiator 39 as taught in Depew.

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In reviewing all three references, we fail to find that any of the references suggests that their radiator would be superior as a single piece or individual pieces.

Therefore, we

fail to find any support in the references to show that Depew's single piece radiator is superior to individual vanes as taught by Zelinka or Rinia. Therefore, we fail to find that the art suggests the desirability of the Examiner's modification of Depew's radiator.

We have not sustained the rejection of claims 1, 3, 4, 6 and 7 under 35 U.S.C. § 103. Accordingly, the Examiner's decision is reversed.

REVERSED

ERROL A. KRASS)
Administrative Patent Judge)
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)	
	JOSEPH L. DIXON)	
	Administrative Patent Judge)	

MRF:psb

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